AMENDMENTS TO THE CLAIMS:

1. (Original) A vehicle steering apparatus comprising:

a steering mechanism for turning a steerable tired-wheel;

a steering actuator for providing a steering force to the steering mechanism;

a load detecting unit for detecting a tire load, which is a load applied to a tire of a vehicle; and

a steering control unit for controlling the steering actuator according to the tire load detected by the load detecting unit.

2. (Original) The vehicle steering apparatus according to Claim 1,

wherein the load detecting unit comprises an air pressure detecting unit for detecting the air pressure of the tire.

3. (Currently amended) The vehicle steering apparatus according to Claim 1 ~~or 2~~,

wherein the load detecting unit comprises a stress detecting unit for detecting a stress applied to the tire.

4. (Original) The vehicle steering apparatus according to Claim 3,

wherein the stress detecting unit preferably includes a left side stress detecting unit and a right side stress detecting unit for detecting stresses applied to the left side and the right side of the tire respectively when viewed toward the direction of travel of the vehicle.

5. (Original) The vehicle steering apparatus according to Claim 4, further comprising:

a steering direction detecting unit for detecting the steering direction of the vehicle;

wherein the steering control unit controls the steering actuator based on the steering direction of the vehicle detected by the steering direction detecting unit and the stresses detected by the left side stress detecting unit and the right side stress detecting unit, respectively.

6. (Original) The vehicle steering apparatus according to Claim 5,

wherein the steering control unit controls the steering actuator based on the steering direction of the vehicle detected by the steering direction detecting unit and the stresses applied on the outer portions of the tire when viewed in the direction of travel detected by the left side stress detecting unit and the right side stress detecting unit.

7. (Original) A vehicle steering apparatus in which the steering mechanism for turning the steerable wheel is operated according to an operation of the operating member for steering the vehicle, comprising:

a reaction force actuator for providing an operation reaction force to the operating member;

a load detecting unit for detecting the tire load which is applied to the tire of the vehicle; and

a reaction force control unit for controlling the reaction force actuator according to the tire load detected by the load detecting unit.

8. (Original) The vehicle steering apparatus according to Claim 7,

wherein the load detecting unit comprises an air pressure detecting unit for detecting the air pressure of the tire.

9. (Currently amended) The vehicle steering apparatus according to Claim 7 ~~or 8~~,

wherein the load detecting unit comprises a stress detecting unit for detecting a stress applied to the tire.

10. (Original) The vehicle steering apparatus according to Claim 9,

wherein the stress detecting unit comprises the left side stress detecting unit and the right side stress detecting unit for detecting stresses applied to the left side and the right side of the tire respectively when viewed toward the direction of travel of the vehicle.

11. (Original) The vehicle steering apparatus according to Claim 10, further comprising:

a steering direction detecting unit for detecting the steering direction of the vehicle,

wherein the reaction force control unit controls the reaction force actuator based on the steering direction of the vehicle detected by the steering direction detecting unit and the stresses detected by the left side stress detecting unit and the right side stress detecting unit, respectively.

12. (Original) The vehicle steering apparatus according to Claim 11,

wherein the reaction force control unit controls the reaction force actuator based on the steering direction of the vehicle detected by the steering direction detecting unit and the

stresses applied on the outer portions of the tire when viewed in the direction of travel detected by the left side stress detecting unit and the right side stress detecting unit.

13. (Original) A vehicle steering apparatus is which a steering mechanism for turning a steerable tired-wheel is operated according to the operation of an operating member to be operated by a driver, comprising:

an actuator for applying a force to the operating member for transmitting information to the driver;

at least one sensor for detecting the physical amount relating to the movement of the vehicle and outputting the detection signal according to the detected result;

a signal analyzing unit for analyzing the detected signal output by the sensor and supplying an analytical solution; and

a control unit for controlling the actuator based on the analytical solution supplied from the signal analyzing unit.

14. (Original) The vehicle steering apparatus according to Claim 11, further comprising:

a first determining unit for determining whether or not the analytical solution analyzed by the signal analyzing unit conforms a predetermined first reference condition; and

a teaching unit for providing, when the analytic solution of the signal analyzing unit conforms the first reference condition, a teaching corresponding to the result of determination to the driver.

15. (Currently amended) The vehicle steering apparatus according to Claim 13 ~~or 14~~, further comprising:

a second determining unit for determining whether or not the analytical solution analyzed by the signal analyzing unit conforms a predetermined second reference condition;

wherein when the analytic solution of the signal analyzing unit is determined to conform the second reference condition by the second determining unit, the control unit controls the actuator according to the analytic solution.

16. (Original) A vehicle steering apparatus for operating a steering mechanism for turning a steerable tired-wheel according to the operation of an operating member to be operated by a driver, comprising:

an actuator for applying a force to the operating member for transmitting information to the driver;

a load detecting unit for detecting the tire load which is a load to be applied to the tire of the vehicle;

a steering mechanism system detecting unit for detecting the physical amount applied to the steering mechanism;

a vehicle condition detecting unit for detecting the physical amount relating to the movement of the vehicle;

a control unit for controlling the actuator based on the result detected by at least one of the load detecting unit, the steering mechanism system detecting unit, and the vehicle condition detecting unit; and

a teaching unit for giving a predetermined teaching to the driver based on the result detected by at least one of the load detecting unit, the steering mechanism system detecting unit, and the vehicle condition detecting unit.

17. (New) The vehicle steering apparatus according to Claim 2,

wherein the load detecting unit comprises a stress detecting unit for detecting a stress applied to the tire.

18. (New) The vehicle steering apparatus according to Claim 8,

wherein the load detecting unit comprises a stress detecting unit for detecting a stress applied to the tire.

19. (New) The vehicle steering apparatus according to Claim 14, further comprising:

a second determining unit for determining whether or not the analytical solution analyzed by the signal analyzing unit conforms a predetermined second reference condition;

wherein when the analytic solution of the signal analyzing unit is determined to conform the second reference condition by the second determining unit, the control unit controls the actuator according to the analytic solution.